

Monday, May 21, 2012

Attn: Mr. Darrick Jones Leggette, Brashears & Graham 6 Executive Drive Farmington CT 06030

Project ID: SATIN

Sample ID#s: BB84415 - BB84419

This laboratory is in compliance with the NELAC requirements of procedures used except where indicated.

This report contains results for the parameters tested, under the sampling conditions described on the Chain Of Custody, as received by the laboratory. All soils and sludges are reported on a dry weight basis unless otherwise noted in the sample comments.

A scanned version of the COC form accompanies the analytical report and is an exact duplicate of the original.

If you have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext. 200.

Sincerely yours,

Phyllis Shiller

Laboratory Director

NELAC - #NY11301 CT Lab Registration #PH-0618 MA Lab Registration #MA-CT-007 ME Lab Registration #CT-007

NH Lab Registration #213693-A,B

NJ Lab Registration #CT-003 NY Lab Registration #11301 PA Lab Registration #68-03530 RI Lab Registration #63 VT Lab Registration #VT11301



587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045 Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

May 21, 2012

FOR: Attn: Mr. Darrick Jones

Leggette, Brashears & Graham

6 Executive Drive Farmington CT 06030

Sample InformationCustody InformationDateTimeMatrix:GROUND WATERCollected by:05/09/129:50Location Code:LBG-FARMReceived by:LB05/10/1215:06

Duch Dequest: Standard Analyzed by:

Rush Request: Standard Analyzed by: see "By" below P.O.#:

<u>Laboratory Data</u> SDG ID: GBB84415

Phoenix ID: BB84415

Project ID: SATIN
Client ID: RIZ-14

Parameter	Result	RL	Units	Date	Time	Ву	Reference
Extraction of CT ETPH	Completed			05/11/12		F/D	3510/3520
Semi-Volatile Extraction	Completed			05/10/12		F/E	SW3520
TPH by GC (Extractab	<u>le Products)</u>						
Ext. Petroleum HC	ND	0.070	mg/L	05/15/12		JRB	CTETPH/8015DRO
Identification	ND		mg/L	05/15/12		JRB	CTETPH/8015DRO
QA/QC Surrogates							
% n-Pentacosane	95		%	05/15/12		JRB	50 - 150 %
Semivolatiles by SIM							
2-Methylnaphthalene	ND	2.5	ug/L	05/12/12		DD	8270(SIM)
Acenaphthene	ND	2.5	ug/L	05/12/12		DD	8270(SIM)
Acenaphthylene	ND	0.30	ug/L	05/12/12		DD	8270(SIM)
Anthracene	ND	2.5	ug/L	05/12/12		DD	8270(SIM)
Benz(a)anthracene	ND	0.020	ug/L	05/12/12		DD	8270(SIM)
Benzo(a)pyrene	ND	0.020	ug/L	05/12/12		DD	8270(SIM)
Benzo(b)fluoranthene	ND	0.020	ug/L	05/12/12		DD	8270(SIM)
Benzo(ghi)perylene	ND	2.5	ug/L	05/12/12		DD	8270(SIM)
Benzo(k)fluoranthene	ND	0.020	ug/L	05/12/12		DD	8270(SIM)
Chrysene	ND	0.020	ug/L	05/12/12		DD	8270(SIM)
Dibenz(a,h)anthracene	ND	0.010	ug/L	05/12/12		DD	8270(SIM)
Fluoranthene	ND	2.5	ug/L	05/12/12		DD	8270(SIM)
Fluorene	ND	2.5	ug/L	05/12/12		DD	8270(SIM)
Indeno(1,2,3-cd)pyrene	ND	0.020	ug/L	05/12/12		DD	8270(SIM)
Naphthalene	ND	2.5	ug/L	05/12/12		DD	8270(SIM)
Phenanthrene	ND	0.070	ug/L	05/12/12		DD	8270(SIM)
Pyrene	ND	2.5	ug/L	05/12/12		DD	8270(SIM)
QA/QC Surrogates							

Page 1 of 6 Ver 1

Project ID: SATIN Phoenix I.D.: BB84415

Client ID: RIZ-14

Parameter	Result	RL	Units	Date	Time	Ву	Reference
% 2-Fluorobiphenyl	76		%	05/12/12		DD	30 - 130 %
% Nitrobenzene-d5	76		%	05/12/12		DD	30 - 130 %
% Terphenyl-d14	136		%	05/12/12		DD	30 - 130 % 3

^{3 =} This parameter exceeds laboratory specified limits.

Comments:

If there are any questions regarding this data, please call Phoenix Client Services at extension 200.

ND=Not detected BDL=Below Detection Level RL=Reporting Level

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Page 2 of 6 Ver 1

^{*} The surrogate failed method criteria due to sample matrix interference for the semivolatile analysis. The other surrogates associated with this sample were within QA/QC criteria. No further action was necessary.



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Analysis Report

May 21, 2012

FOR: Attn: Mr. Darrick Jones

see "By" below

LB

Leggette, Brashears & Graham

6 Executive Drive Farmington CT 06030

Sample Information

GROUND WATER

Location Code:

Matrix:

LBG-FARM

RI7-11

Rush Request:

Standard P.O.#:

<u>aboratory Data</u>

Custody Information

Collected by:

Received by:

Analyzed by:

SDG ID: GBB84415

Time

13:25

15:06

Date

05/09/12

05/10/12

Phoenix ID: BB84416

Project ID: SATIN

Parameter	Result	RL	Units	Date	Time	Ву	Reference
Lead Total Metals Digestion	< 0.002 Completed	0.002	mg/L	05/14/12 05/10/12		LK AG	6010/200.7

Comments:

Client ID:

If there are any questions regarding this data, please call Phoenix Client Services at extension 200. ND=Not detected BDL=Below Detection Level RL=Reporting Level

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Page 3 of 6 Ver 1



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Analysis Report

May 21, 2012

FOR: Attn: Mr. Darrick Jones

Leggette, Brashears & Graham

6 Executive Drive Farmington CT 06030

Sample Information

GROUND WATER

Location Code: Rush Request: LBG-FARM Standard

P.O.#:

Matrix:

<u>Custody Information</u>

Collected by:

Received by:

LB

<u>Date</u> 05/09/12

11:05

Time

05/10/12

15:06

Analyzed by: see "By" below

Laboratory Data

SDG ID: GBB84415 Phoenix ID: BB84417

Project ID: SATIN

Client ID: MW-14

Parameter	Result	RL	Units	Date	Time	Ву	Reference
Lead Total Metals Digestion	0.018 Completed	0.002	mg/L	05/14/12 05/10/12		LK AG	6010/200.7

Comments:

If there are any questions regarding this data, please call Phoenix Client Services at extension 200. ND=Not detected BDL=Below Detection Level RL=Reporting Level

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Page 4 of 6 Ver 1



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Analysis Report

May 21, 2012

FOR: Attn: Mr. Darrick Jones

see "By" below

Leggette, Brashears & Graham

6 Executive Drive Farmington CT 06030

Sample Information

Matrix: **GROUND WATER**

Location Code: LBG-FARM Rush Request:

Standard

P.O.#:

Project ID:

Custody Information

<u>aboratory Data</u>

Collected by: Received by:

Analyzed by:

LB

05/09/12 12:10

15:06

Phoenix ID: BB84418

Time

05/10/12

SDG ID: GBB84415

Date

SATIN

MW-11 Client ID:

Parameter	Result	RL	Units	Date	Time	Ву	Reference
Lead Total Metals Digestion	< 0.002 Completed	0.002	mg/L	05/18/12 05/10/12		LK AG	6010/200.7

Comments:

If there are any questions regarding this data, please call Phoenix Client Services at extension 200. ND=Not detected BDL=Below Detection Level RL=Reporting Level

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Page 5 of 6 Ver 1



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Analysis Report

May 21, 2012

FOR: Attn: Mr. Darrick Jones

see "By" below

LB

Leggette, Brashears & Graham

6 Executive Drive Farmington CT 06030

Sample Information

GROUND WATER

Location Code:

Matrix:

P.O.#:

LBG-FARM

Rush Request:

Standard

<u>aboratory Data</u>

Custody Information

Collected by:

Received by:

Analyzed by:

SDG ID: GBB84415

Time

12:45

15:06

Date

05/09/12

05/10/12

Phoenix ID: BB84419

SATIN Project ID: MW-10 Client ID:

Parameter	Result	RL	Units	Date	Time	Ву	Reference
Lead Total Metals Digestion	< 0.002 Completed	0.002	mg/L	05/14/12 05/10/12		LK AG	6010/200.7

Comments:

If there are any questions regarding this data, please call Phoenix Client Services at extension 200. ND=Not detected BDL=Below Detection Level RL=Reporting Level

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May 21, 2012

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Page 6 of 6 Ver 1



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QA/QC Report

May 21, 2012

QA/QC Data

c D C	ı n .	
SUG	1. D.:	GBB84415

Parameter	Blank	Sample Result	Dup Result	Dup RPD	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits	
QA/QC Batch 200482, QC Sample No: BB84508 (BB84416, BB84417, BB84418, BB84419)													
ICP Metals - Aqueous													
Lead	BDL	0.002	< 0.002	NC	104	99.9	4.0	105	103	1.9	75 - 125	20	



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QA/QC Report

May 21, 2012

QA/QC Data

SDG I.D.: GBB84415 % LCS LCSD LCS MSD MS **RPD**

Parameter	Blank	%	%	RPD	%	%	RPD	Limits	Limits
QA/QC Batch 200232, QC Sa	ample No: BB82301 (BB84415)								
	le Products) - Ground W								
Ext. Petroleum HC	ND	96	91	5.3				50 - 150	20
% n-Pentacosane	114	115	114	0.9				50 - 150	20
Comment:									
A LCS and LCS Duplicate were	performed instead of a matrix spike	and matrix spike d	luplicate	<u>)</u> .					
QA/QC Batch 200449, QC Sa	ample No: BB84163 (BB84415)								
Semivolatiles - Ground	Water								
2-Methylnaphthalene	ND	68	68	0.0				30 - 130	20
Acenaphthene	ND	71	71	0.0				30 - 130	20
Acenaphthylene	ND	69	70	1.4				30 - 130	20
Anthracene	ND	73	75	2.7				30 - 130	20
Benz(a)anthracene	ND	80	82	2.5				30 - 130	20
Benzo(a)pyrene	ND	67	68	1.5				30 - 130	20
Benzo(b)fluoranthene	ND	74	76	2.7				30 - 130	20
Benzo(ghi)perylene	ND	82	83	1.2				30 - 130	20
Benzo(k)fluoranthene	ND	72	75	4.1				30 - 130	20
Chrysene	ND	73	74	1.4				30 - 130	20
Dibenz(a,h)anthracene	ND	75	77	2.6				30 - 130	20
Fluoranthene	ND	72	73	1.4				30 - 130	20
Fluorene	ND	73	73	0.0				30 - 130	20
Indeno(1,2,3-cd)pyrene	ND	78	79	1.3				30 - 130	20
Naphthalene	ND	66	66	0.0				30 - 130	20
Phenanthrene	ND	76	77	1.3				30 - 130	20
Pyrene	ND	73	74	1.4				30 - 130	20

A LCS and LCS Duplicate were performed instead of a matrix spike and matrix spike duplicate.

74

78

102

Additional 8270 criteria: 20% of compounds can be outside of acceptance criteria as long as recovery is at least 10%. (Acid surrogates acceptance range for aqueous samples: 15-110%, for soils 30-130%)

If there are any questions regarding this data, please call Phoenix Client Services at extension 200.

RPD - Relative Percent Difference

LCS - Laboratory Control Sample

LCSD - Laboratory Control Sample Duplicate

MS - Matrix Spike

% 2-Fluorobiphenyl

% Nitrobenzene-d5

% Terphenyl-d14

Comment:

MS Dup - Matrix Spike Duplicate

NC - No Criteria

Intf - Interference

Phyllis/Shiller, Laboratory Director

30 - 130

30 - 130

30 - 130

20

20

20

May 21, 2012

3.2

0.0

0.0

65

65

QA/QC Data

SDG I.D.: GBB84415

Monday, May 21, 2012

Requested Criteria: GWP, SWP

Sample Criteria Exceedences Report

GBB84415

•						GDD04413					Factored	
SampNo	LocCode	Acode	Phoenix Analyte	Criteria Units	ST	State Category	Criteria Name	Result	RL	Factored Criteria	RL Criteria	Analysis Units
BB84417	LBG-FARM	PB-WM	Lead	ug/L	СТ	Inorganic Substances	GWPC (µg/L)	0.018	0.002	0.015	0.015	mg/L
BB84417	LBG-FARM	PB-WM	Lead	ug/L	СТ	Inorganic Substances	SWPC (µg/L)	0.018	0.002	0.013	0.013	mg/L

Phoenix Laboratories does not assume responsibility for the data contained in this report. It is provided as an additional tool to identify requested criteria exceedences. All efforts are made to ensure the accuracy of the data (obtained from appropriate agencies). A lack of exceedence information does not necessarily suggest conformance to the criteria. It is ultimately the site professional's responsibility to determine appropriate compliance.

Page 1 of 1

Reasonable Confidence Protocol Laboratory Analysis QA/QC Certification Form

Labo	oratory Name:	G-FARM										
Proje	ect Location:	SATIN		Project	Number:							
Labo	oratory Sample	e ID(s): BB8441	5, BB84416,	BB84417, BB84	1418, BB84419							
Sam	pling Date(s):	5/9/2012										
RCP	Methods Used	d:										
13	311/1312 2 60°	10 7000	7196	7470/7471	8081	☐ EPH		TO15				
80	082 🗌 819	51 🗌 8260	✓ 8270	✓ ETPH	9010/9012	☐ VPH						
1.	For each analytic specified QA/QC any criteria falling specific Reasona	✓ Yes	□ No									
1a.	Were the method	d specified preserva	ition and holdi	ng time requireme	nts met?	✓ Yes	\square No					
1b.		nethods only: Was cations (see section				☐ Yes	□ No	✓ NA				
2.		received by the late associated Chain-			t with that	✓ Yes	□No					
3.	Were samples re	eceived at an appro	oriate tempera	ture (< 6 Degrees	C)?	✓ Yes	\square No	□NA				
4.	Were all QA/QC documents achie	performance criteri eved?	a specified in t	he Reasonable Co	onfidence Protoc	✓ Yes	□ No					
5a.	Were reporting li	mits specified or ref	erenced on th	e chain-of-custody	ſ?	✓ Yes	□ No					
5b.	Were these repo	rting limits met?				✓ Yes	□No	□NA				
6.	reported for all co	cal method reference onstituents identified Confidence Protoco	d in the method	d-specific analyte		☐ Yes	✓ No	□NA				
7.	Are project-spec	ific matrix spikes an	d laboratory d	uplicates included	in the data set?	□ Yes	✓ No	□NA				
Note:	provided in an at	to which the respor tached narrative. If "Reasonable Confid	the answer to c									
and	belief and bas	l, attest under the sed upon my pe analytical report	rsonal inqui	iry of those res	sponsible for p	roviding th						
	Date: Monday, May 21, 2012											
	horized nature:	day, May 2′ yam Taylor	ı, ∠012									
J.9.			V		Position: Proj		•					



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RCP Certification Report

May 21, 2012

SDG I.D.: GBB84415

The client requested a shorter list of elements than the 6010 RCP list.

8270 Semi-volatile Organics:

Only the PAH constituents are reported as requested on the chain-of-custody. In order to achieve the requested reporting levels for the target compounds, the sample was extracted and analyzed via 8270 selective ion monitoring (SIM).

ETPH Narration

Were all QA/QC performance criteria specified in the Reasonable Confidence Protocol documents achieved? Yes.

Instrument: Au-fid84 05/15/12-1 (BB84415)

Initial Calibration (FID84 - ETPH_13) - The initial calibration curve was within method criteria and had a %RSD less than 30%.

The daily continuing calibration standard was within method criteria of +/- 30% RSD.

As per section 7.2.3, a discrimination check standard was run and contained the following outliers:C36

Printed Name Jeff Bucko **Position:** Chemist **Date:** 5/15/2012

OC Comments: QC Batch 00232 05/08/12 (BB84415)

A LCS and LCS Duplicate were performed instead of a matrix spike and matrix spike duplicate.

QC (Batch Specific)

----- Sample No: BB82301, QA/QC Batch: 200232 -----

All LCS recoveries were within 50 - 150 with the following exceptions: None.

All LCSD recoveries were within 50 - 150 with the following exceptions: None.

All LCS/LCSD RPDs were less than 20% with the following exceptions: None.

ICP Narration

Were all QA/QC performance criteria specified in the Reasonable Confidence Protocol documents achieved? Yes.

Instrument: Icp10 05/13/12-1 (BB84416, BB84417, BB84418, BB84419)

The initial calibration met criteria.

The continuing calibration standards met criteria for all the elements reported. The linear range is defined daily by the calibration range.

The continuing calibration blanks were less than the reporting level for the elements reported.

The ICSA and ICSAB were analyzed at the beginning and end of the run and were within criteria.



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RCP Certification Report

May 21, 2012

SDG I.D.: GBB84415

Printed Name Laura Kinnin Position: Chemist Date: 5/13/2012

Instrument: <u>Icp10 05/14/12-1 (BB84416, BB84417, BB84418, BB84419)</u>

The initial calibration met criteria.

The continuing calibration standards met criteria for all the elements reported. The linear range is defined daily by the calibration range.

The continuing calibration blanks were less than the reporting level for the elements reported.

The ICSA and ICSAB were analyzed at the beginning and end of the run and were within criteria.

Printed Name Laura Kinnin Position: Chemist 5/14/2012

Instrument: <u>Icp10 05/17/12-1 (BB84418)</u>

The initial calibration met criteria.

The continuing calibration standards met criteria for all the elements reported. The linear range is defined daily by the calibration range.

The continuing calibration blanks were less than the reporting level for the elements reported.

The ICSA and ICSAB were analyzed at the beginning and end of the run and were within criteria.

Printed Name Laura Kinnin Position: Chemist Date: 5/17/2012

QC (Batch Specific)

------ Sample No: BB84508, QA/QC Batch: 200482 -----

All LCS recoveries were within 75 - 125 with the following exceptions: None.

All LCSD recoveries were within 75 - 125 with the following exceptions: None.

All LCS/LCSD RPDs were less than 20% with the following exceptions: None.

SVOA Narration

Were all QA/QC performance criteria specified in the Reasonable Confidence Protocol documents achieved? Yes.

QC Comments: QC Batch 00449 05/10/12 (BB84415)

A LCS and LCS Duplicate were performed instead of a matrix spike and matrix spike duplicate.



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RCP Certification Report

May 21, 2012

SDG I.D.: GBB84415

QC (Batch Specific)

----- Sample No: BB84163, QA/QC Batch: 200449 -----

All LCS recoveries were within 30 - 130 with the following exceptions: None.

All LCSD recoveries were within 30 - 130 with the following exceptions: None.

All LCS/LCSD RPDs were less than 20% with the following exceptions: None.

Additional 8270 criteria: 20% of compounds can be outside of acceptance criteria as long as recovery is at least 10%. (Acid surrogates acceptance range for aqueous samples: 15-110%, for soils 30-130%)

SVOASIM Narration

Were all QA/QC performance criteria specified in the Reasonable Confidence Protocol documents achieved? Yes.

Instrument: Chem04 05/11/12-1 (BB84415)

The DDT breakdown and pentachlorophenol & benzidine peak tailing were not evaluated in the DFTPP tune.

In the event that lower detection levels were requested, the samples may have been analyzed by selective ion monitoring (SIM) mode.

If PAH/base neutral were requested, Phoenix utilized a method that contained a shortened list, so some of the compounds in the narrative may be non-applicable.

Initial Calibration (Chem04/SIM_0511):

Greater than 90% of the target compounds met calibration criteria with a RSD <20% or >0.99 correlation coefficient. The following compounds had RSDs >20% and <0.99 correlation coefficient: Bis(2-ethylhexyl)phthalate

The following compounds failed to meet the minimum required response factor: None

Continuing Calibration:

Greater than 80% of target compounds met continuing calibraion criteria with a D < 20. The following compunds had > 20% difference from the initial calibration: None.

Printed Name Damien Drobinski

Position: Chemist **Date:** 5/11/2012

OC Comments: QC Batch 00449 05/10/12 (BB84415)

A LCS and LCS Duplicate were performed instead of a matrix spike and matrix spike duplicate.

Additional 8270 criteria:20% of compounds can be outside of acceptance criteria as long as recovery is at least 10%. (Acid surrogates acceptance range for aqueous samples: 15-110%, for soils 30-130%)

Data Delivery:	· Fax #:	Project P.O:	Phone #: (860) 678-6404	Fax #:		140001	# 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	000 8 10 10 10 10 10 10 10 10 10 10 10 10 10									MCP Cert. Comparate Control Co		A eSMART	5	
CHAIN OF CUSTODY RECORD 587 East Middle Turnpike, P.O. Box 370, Manchester, CT 06040	Service@phoenixlabs.com Fax (860) 645-0823 Client Services (860) 645-8726		Joines					100 100 100 100 100 100 100 100 100 100									CT/RI R RCP Cert. K GW Protect. GA Mobility	. ≥ t	Res. Vol. Ind. Vol. CGE Res. Criteria	amples were collected	
CHAIN OF CUS	Email: service@phoenixlabs.com Client Services (86	Project: SATIN	Report to: Descrick	Invoice to:		Analysis Request	/ ,	Time Sampled	(~ I	1325 X	 X	llos X	Isie X	XIShEI			5/19/12 12:30	6			
	es, Inc.		ય	೧೯೦ 32	n - Identification	Date 5-6	S=soil/solid O=other A=air	Sample Date Matrix Sampled	GW 5-9-12		+			7			Accepted by		ons:		
	Environmental Laboratories,	636, Frc	Executive Drive	Ferminglay CT OF	Client Sample - Information - Identification		WW=wastewater S=soil SL=sludge A=air	Customer Sample Identification	RIPIN	RIZ-1)	-Mh2-15	MW-14	11-01-1	NW-10			ed by:		Comments, Special Requirements or Regulations:		
DHd	Environme	M	Address: 6 (Fresh	Ĭ	Sampler's Signature	Matrix Code: DW=drinking water GW=groundwater	Phoenix Sample #	84416	31118		しいかり8	81118	61hh8			My ON ON (M)	Jane /	Comments, Special F	:	